

REMARKS

Claims 1, 3-7, 9-12, 14-18, 20-23, 25-29 and 31-33 are pending and have been examined in the present application.

Applicants wish to thank the Examiner for the indication of allowance of claims 9, 10, 20, 21, 31 and 32. Applicants respectfully submit that all other pending claims are allowable for at least the reasons set forth herein.

Claims 1, 3-7, 11, 12, 14-18, 22, 23, 25-29 and 33 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,724,097 to Hibi et al. Applicants respectfully traverse this rejection.

Independent claims 1, 12 and 23

Among the limitations of independent claims 1, 12 and 23 which are neither disclosed nor suggested in the art of record is an image encoding method, apparatus and computer-readable medium that sets a dead zone for each block.

In contrast, Hibi et al. sets a dead zone for each frequency area. Specifically, Hibi et al. teaches dividing a digital video signal data into blocks. The thus blocked data is then subjected to an orthogonal transform to generate 64 transformed coefficients and, then, 63 out of the resultant 64 transformed coefficients are classified into four areas according to their frequencies. Subsequently, the dead zone is switched for each of the four areas to quantize the transformed coefficients therein. Therefore, it follows that in Hibi et al., four dead zones are set when a block is transformed from a spatial domain into a frequency domain.

Hibi et al. thus does not disclose or suggest setting a dead zone for each block, and can not anticipate independent claims 1, 12 and 23. Accordingly, it is respectfully submitted that independent claims 1, 12 and 23 patentably distinguish over Hibi et al.

Claims 3-7 depend either directly or indirectly from independent claim 1 and include all of the limitations found therein. Claims 14-18 depend either directly or indirectly from independent claim 12 and include all of the limitations found therein. Claims 25-29 depend either directly or indirectly from independent claim 23 and include all of the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the art of record. Accordingly, claims 3-7, 14-18 and 25-29 are likewise patentable.

Independent claims 11, 22, and 33

Among the limitations of independent claims 1, 12 and 23 which are neither disclosed nor suggested in the art of record is an image encoding method, apparatus and computer-readable medium that evaluates a relationship between a quantization width corresponding to the ideal quantization parameter, and a quantization width corresponding to a quantization parameter used for encoding output.

The Office Action states in numbered paragraph 4 that “Hibi discloses the block parameter is provided from the code amount control taking in combination with the switch control and the quantization step.” Applicant does not understand this contention. It is assumed that, based on this comment, the Office Action regards the switch control and the quantization step of Hibi et al. as corresponding respectively to the two quantization parameters defined in independent claims 11, 22 and 33.

In contrast, according to the present invention defined in independent claims 11, 22 and 33, a relationship is evaluated between two quantization widths, i.e., a quantization width corresponding to the ideal quantization parameter and a quantization width corresponding to a quantization parameter used for encoding output. While the switch control of Hibi et al. does refer to dead zone switching control, Applicants do not understand what would be considered a quantization width in switch control in order for the switch control of Hibi et al. to correspond to

one of the claimed quantization parameters of independent claims 11, 22 and 33. Clarification from the Examiner is respectfully requested so Applicants can provide a response thereto.

Without such clarification, it is respectfully submitted that Hibi et al. does not disclose or suggest “evaluating a relationship between a quantization width corresponding to the ideal quantization parameter, and a quantization width corresponding to a quantization parameter used for encoding output,” and thus can not anticipate independent claims 11, 22 and 33.

Moreover, independent claims 11, 22 and 33 require “setting the dead zone width in correspondence with the evaluated relationship.” In contrast, in Hibi et al. the dead zone width is set only by switch control. Thus, Hibi et al. can not anticipate claims 11, 22 or 33 for this reason as well.

In view of the foregoing, favorable consideration and allowance of the present application with claims 1, 3-7, 9-12, 14-18, 20-23, 25-29 and 31-33 is respectfully and earnestly solicited.

Dated: December 28, 2011

Respectfully submitted,

Electronic signature: /Richard LaCava/
Richard LaCava

Registration No.: 41,135
DICKSTEIN SHAPIRO LLP
1633 Broadway
New York, New York 10019-6708
(212) 277-6500
Attorney for Applicant